


**MClimate Open/Close  
Sensor LoRaWAN®**

User manual

Scan the QR Code  
to access MClimate  
Open/Close Sensor  
LoRaWAN® extended  
documentation



 Need  
some help?

For more product information and issues  
related to it, visit:

[mclimate.eu/lorawan-resources](https://mclimate.eu/lorawan-resources)

or write us to:

[lorawan-support@mclimate.eu](mailto:lorawan-support@mclimate.eu)

 00359 800 3 1010  
Monday-Friday  
09:00 - 18:00

 Sofia, Bulgaria  
Sofia Tech Park,  
labs building, floor 1 1

## Bulgarian

За да разберете как се инсталира MClimate Open/Close Sensor LoRaWAN®, сканирайте QR кода или посетете линка до него.

## Czech

Chcete-li zjistit, jak nainstalovat MClimate Open/Close Sensor LoRaWAN®, prohlédněte si kód QR nebo navštivte odkaz vedle něj.

## Italian

Per installare MClimate Open/Close Sensor LoRaWAN® scannerizzare il codice QR oppure aprire il link al suo lato.

## Polish

Aby dowiedzieć się, jak zainstalować MClimate Open/Close Sensor LoRaWAN®, zeskanuj kod QR lub odwiedź link obok niego.

## Swedish

För att ta reda på hur du installerar MClimate Open/Close Sensor LoRaWAN®, skanna QR-koden eller besök länken bredvid den.

## Finnish

Tutustu MClimate Open/Close Sensor LoRaWAN®-laitteen asentamiseen, skannaa QR-koodi tai vieraila sen vieressä olevassa linkissä.

## German

Um herauszufinden, wie man MClimate Open/Close Sensor LoRaWAN® installiert, scannen Sie den QR-Code oder besuchen Sie den Link daneben.

## French

Pour savoir comment installer MClimate Open/Close Sensor LoRaWAN®, scannez le code QR ou visitez le lien à côté de celui-ci.

## Dutch

Om te weten te komen hoe u MClimate Open/Close Sensor LoRaWAN® installeert, scan de QR-code of bezoek de link ernaast.

## Spanish

Para saber cómo instalar MClimate Open/Close Sensor LoRaWAN®, escanee el código QR o visite el enlace al lado.

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# What's inside the box?



magnet



main device



ER14250  
3.6 VDC battery

MClimate Open/Close  
Sensor LoRaWAN®

# Technical specifications

**Description:** MClimate Open/Close Sensor LoRaWAN® is a device detecting the event of opening or closing windows, doors, cabinets and more. It features long battery life, LED, temperature sensor and a button that triggers an uplink. The device sends an uplink for every event of opening/closing and keeps an internal counter of the total number of events. Created by MClimate™

**Model:** MC-LW-OC-01

**Dimensions:** Main unit: 72x20x20mm; Magnet: 50x10x15mm

**Weight:** 26gr

**Frequency range:** 863÷870MHz (others available on demand)

**Power supply:** Battery: ER14250 or 1/2 AA (included in the device) 3.6VDC

**Expected Battery Life:** 5-10 years (depending on configuration and environment)

**Sensors:** built-in temperature sensor

**Work temperature:** 0°C to +50°C

**Material:** ABS Enclosure

**Environmental conditions, in which the device is intended to operate:**

- Indoor using;
- for altitude up to 2000m;
- for an ambient temperature: 0°C to +60°C;
- for maximum relative humidity of 80% for temperature up to 31°C, decreasing linearly to 25% relative humidity at temperature 50°C;
- for environment with a degree of contamination 2 (PD2).

**Storage and transportation conditions:**

- for an ambient temperature :-40°C to +85°C;
- for relative humidity 5% to 90% without condensation

**Manufacturer**

MClimate Jsc, 1784 Sofia, Sofia Tech Park, Labs, Floor 1

**Compliance with the WEEE Directive**

The appliance marked with this symbol should not be disposed of with other household waste.

It must be handed over to the relevant collection point for the recycling of electrical and electronic equipment.

# **▲ Safety Instructions**

Please read the safety instructions before installing the device! Failure to follow the recommended instructions in this manual may be dangerous or in violation of the law. The manufacturer MClimate Jsc., is not responsible for any loss or damage caused by failure to follow the instructions in the operating manual.

## **Legal Notices**

All information, including but not limited to, features, functionality, and / or other product specifications are subject to change without notice. MClimate retains all rights to review or update its products, software or documentation without being required to notify any natural or legal person. The MClimate and MClimate logo are trademarks of MClimate Jsc. All other brands and product names mentioned herein are trademarks of their respective owners.

### **EU Declaration of Conformity**

This device complies with the essential requirements and other applicable provisions of the following EU directives:

**2014/53/EC, EN 50491-3:2009**

**EEU 300 220-1 V3.1.1:2017**

**EEU 300 220-2 V3.1.1:2017**

**EN 60950-1:2006+A11:2009 +A1:2010+A12:2011+  
A2:2013 + AC:2015**

**EEU 300 220-2 V3.1.1:2017, EN 301 489-1 V2.1.1:2017**

### **Compatibility**

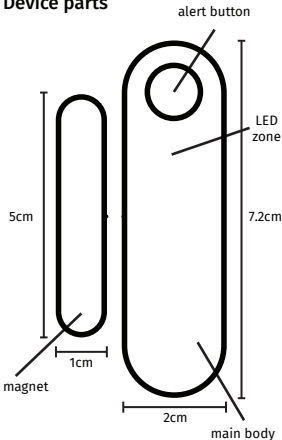
**In order to operate MClimate Open/Close Sensor**

**LoRaWAN<sup>®</sup>, you will need:**

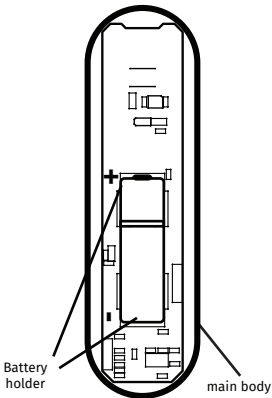
**LoRaWAN<sup>®</sup> network**



## Device parts



Assembled MClimate Open/Close  
Sensor LoRaWAN®, top view

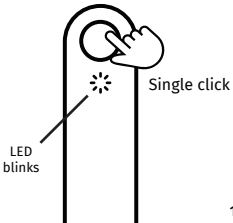


Disassembled MClimate Open/Close  
Sensor LoRaWAN®, top view

# Button and behaviour

Pressing the button generates a custom uplink event that has a specific code appended to the regular payload you can use to customize your system, for example as a trigger or alarm.

Blink times	Function
Blink once	Keep-alive, change of state, button press.
Blink 3 times	The device is trying to join the network



# Commissioning



Before you install the device, we highly recommend that you first commission it on your LNS. Once you wake it up from deep sleep (press the button 5 times in quick succession), the device will initiate a LoRaWAN Join Procedure on SF12. Please, make sure you enable ADR in your LNS and/or mark the device as static. The lower the spreading factor, the better the performance of the energy storage will be.

- 1 Open your LoRaWAN® Network provider access panel and add the device using the supplied Serial Number, DevEUI, AppEUI (JoinEUI) and AppKey.

Device ID: 9X7127965

DevEUI: 70B3D25D00000001

AppEUI: 70B3D25D00000000

AppKey: A0658DFAE721375A709A8B371

Register



The data is example. Do not use.

## 2 Continue the Installation with the instructions of your LoRaWAN® Network provider.

MClimate\_LoRaWAN\_51177

Serial Number	DevEui	AppEui	AppKey
0100000000000000	70B3000000000000	70B3000000000000	5fc310000000000000000000

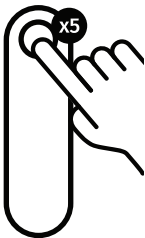


You can get DevEUI, AppEUI (JoinEUI) & AppKey information from the LoRaWAN® credentials .csv file we sent you with the fulfillment confirmation.

## Start-up behavior

In order to start the device you need to wake it up from deep sleep mode. This is done by pressing the button 5 times in quick succession (the LED will blink at this point).

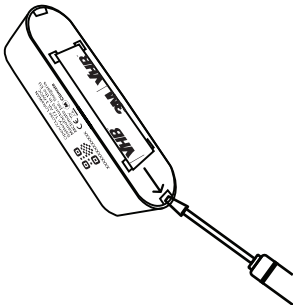
Once powered, it initiates the join procedure, connecting to the LoRaWAN network (as it has been commissioned in the previous step).



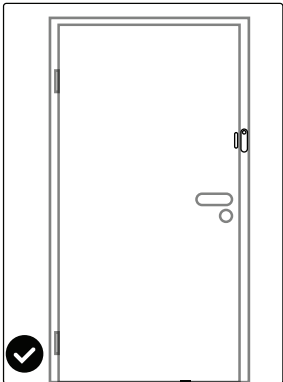
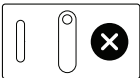
At this point it regularly sends keep-alive messages in addition to sending uplinks whenever there is an open or close event (the magnet being separated from the main body or brought back together).

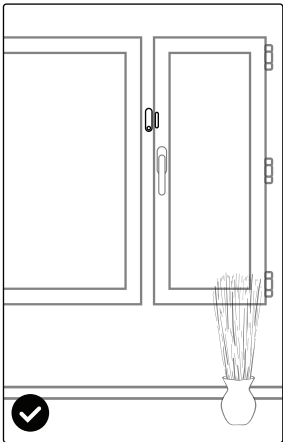
## Open the device

If you need to open the device to replace the battery, use the slot indicated in the picture to open the device. Insert the new battery following the direction indicated on the PCB.

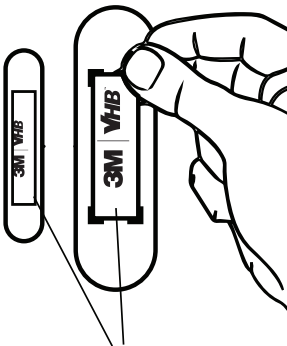


# Placement Guidelines





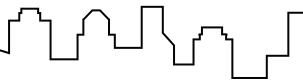
# Installation



Double-sided  
tape



Installing the device near big metal items will worsen the RF performance. We understand that the main use cases involve installing it on doors/windows that by themselves are in many cases metallic, so expect decreased range if you use it for large metal doors and/or windows.



We  
make any  
building  
smart.

[www.mclimate.eu](http://www.mclimate.eu)

Designed & Manufactured by  
MClimate in Europe.